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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER				
NGUYEN, JIMMY H				
ART UNIT		PAPER NUMBER		
2629				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/721,603

Applicant(s)

GEAGHAN ET AL.

Examiner

JIMMY H. NGUYEN

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 9 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 and 10-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

1. This Office Action is made in response to applicant's RESPONSE TO ELECTION REQUIREMENT AND AMENDMENT, filed 01/07/2008.
2. Applicant's election with traverse of Species I in the reply filed on 1/7/2008 is acknowledged. The traversal is on the ground(s) that the Examiner should make a restriction requirement and consider whether there will be a serious burden as early as possible in the prosecution (see page 6, third and fourth paragraphs of the Response to Election Restriction). Examiner agrees with the Applicant; however, during the examination, Examiner has found that this application contains species, which are independent and distinct because as disclosed the different species have mutually exclusive characteristics for each identified species (see the Requirement for Election of Species dated 12/3/2007). In addition, these species are not obvious variants of each other based on the current record. Therefore, in order to best examine the invention without serious burden, an Election of Species is required by the Examiner. Note that if applicant submits evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case, Examiner will withdraw the Election of Species. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Further, Applicant arguments; see page 7, line 3 through page 8, line 5, of the amendment filed 1/7/2008, have been fully considered but they are not fully persuasive because as follows:

- (i) Applicant states that features of Species IV and any of Species I, II, and III identified by the Examiner can coexist in the same embodiment under the disclosure; see page 7,

last two lines. Examiner agrees that only Species IV and Species I can coexist in the same embodiment or Species under the disclosure, because the disclosure, page 10, lines 1-3, only discloses an auxiliary switch 320 used in a stylus having a tip switch while the Species II and III do not require a tip switch. Further, the original disclosure does not fairly provide the operation of a stylus comprising an auxiliary switch and optics of either Species II or III.

(ii) Applicant further states that features of Species II and III identified by the Examiner can coexist in the same embodiment under the disclosure; see page 7, last line through page 8, line 1. Examiner disagrees because as stated on pages 2-3 of the Requirement for Election of Species, Species II (Fig 2b) utilizes a moving assembly (234, 239) including an aperture 234, which moves in and out of the stylus, for **abruptly changing between a narrower light beam and a broader light beam** (see Fig. 2b and the corresponding description, page 9, lines 7-18), and is **not capable** of abruptly changing a light beam between a defocused light beam (B') and a focused, collimated light beam (B) (i.e., a distinct feature of Species III). Species III utilizes a moving assembly (246, a spring, and lens) including a lens 248, which moves in and out of the stylus, for abruptly changing a light beam between a defocused light beam (B') and a focused, collimated light beam (B) (see Fig. 2c and the corresponding description, page 9, lines 19-28), and is **not capable** of abruptly changing a light beam between **a narrower light beam and a broader light beam** (i.e., a distinct feature of Species II). Accordingly, the features of Species II and II can't coexist in the same embodiment.

For the above reasons, Examiner withdraws Species IV as being combinable with Species I. Accordingly, Species I is illustrated by Figures 2a and 3, Species II is illustrated by Figure 2b, Species III is illustrated by Figure 2c.

The requirement is still deemed proper and is therefore made FINAL.

3. Applicant identifies claims 1-8 and 10 readable on elected Species I. However, since Species I now includes the embodiment of Figure 3, which includes "an auxiliary switch", claims 11-18 are also considered.
4. Claim 9 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected II or III, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 1/7/2008. Claims 1-8 and 10-18 are considered as follows:

Drawings

5. The drawing was received on 1/7/2008. This drawing is acceptable.

Claim Objections

6. Claims 14-16 are objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however, the following changes should be made:

As to claim 14, "**the auxiliary switch changes the beam intensity.**" should be changed to -- **the auxiliary switch can cause the abrupt change in the beam intensity.** --, so as to make the claimed feature consistent with the specification, page 10, lines 1-7. Further, see claim 13 as reference.

As to claim 15, "**the auxiliary switch changes the beam modulation.**" should be changed to -- **the auxiliary switch can cause the abrupt change in the beam modulation.** --, so as to make the claimed feature consistent with the specification, page 10, lines 1-7. Further, see claim 13 as reference.

As to claim 16, **“the auxiliary switch changes the beam wavelength.”** should be changed to -- **the auxiliary switch can cause the abrupt change in the beam wavelength.** --, so as to make the claimed feature consistent with the specification, page 10, lines 1-7. Further, see claim 13 as reference.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 17-18, these claims recite features, **“the auxiliary switch focuses the beam”** of claim 17 and **“the auxiliary switch defocuses the beam”** of claim 18, which were not described in the specification in such a way as to enable one skilled in the art to understand **how the auxiliary switch can focus and defocuses the beam the light beam**. Figure 3 merely shows a switch (320) with no connection to any other elements and the description, page 10, lines 3-7, merely discloses “The side switch can be a pressure activated switch that makes or breaks an electrical contact, resulting in a signal. The signal may be a change in the stylus beam such as a

change in beam intensity, duty cycle of a modulated beam, frequency of modulation of the beam, color of the beam, polarization of light in the beam, the on/off condition of the beam, and so forth.” Accordingly, these claims contain the above underlined features which were not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5 and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa (US 6,100,538).

As to claim 1, Ogawa discloses a stylus (a stylus 2; Fig. 18; col. 14, line 21) for use with a light sensitive user input device (an optical digitizer; Fig. 17; col. 13, lines 35-42; col. 14, lines 17-19; col. 15, lines 22-24), the stylus comprising:

a light-emitting device (a light emitting diode 24a; Fig. 18) configured to emit a **green** light beam through a tip (a tip portion 22; Fig. 18; col. 14, line 22) of the stylus when the tip is not in contact with an input surface of the input device (by virtue of the operation described at Fig. 19; col. 14, lines 36-44), the light beam being either red or blue when the tip of the stylus sufficiently contacts the input surface (Fig. 19; col. 14, lines 27-42), the abrupt change in the (color) light beam being detectable by the light sensitive user input device (see col. 14, line 45 through col. 15, line 52).

As to claim 2, Ogawa teaches the stylus (2) comprising a switch (element 21d; Fig. 18) coupled to the tip (22) and configured to actuate the change of the light beam (Fig. 19; col. 14, lines 37-42).

As to claim 3, Ogawa teaches the abrupt change is a change in beam intensity (col. 15, lines 43-45).

As to claim 4, Ogawa teaches the abrupt change is a change in light beam color (col. 14, lines 59-64). Note that the blue light beam has a different wavelength from that of the red light beam. Accordingly, the additional feature of claim 4 is read in the Ogawa reference.

As to claim 5, since Ogawa teaches the abrupt change being a change in light beam color (col. 14, lines 59-64) and each of color components modulated independently (Fig. 19; col. 14, line 37 through col. 15, line 52), Ogawa teaches the abrupt change being a change in beam modulation.

As to claim 11, Ogawa teaches that either a switch (element 21s; Fig. 18) or a switch (element 21d; Fig. 18) can considerably correspond to the claimed auxiliary for controlling the light beam (see col. 14, lines 21-32).

As to claim 12, Ogawa teaches either the switch (21s) or the switch (21d) turning the light beam on and off (col. 14, lines 21-44).

As to claim 13, Ogawa teaches the auxiliary switch (21d) causing the abrupt change in the light beam to simulate a condition where the tip contacts the input surface (col. 14, lines 59-64).

As to claim 14, Ogawa teaches the auxiliary switch (21s, 21d) causing a change in the beam intensity (col. 15, lines 43-45).

As to claim 15, since Ogawa teaches the switch (21s) causing the light beam to change to a green light beam and the switch (21d) causing the light beam to change to a red or blue light beam (Fig. 19; col. 14, lines 37-64) and each of color components modulated independently (Fig. 19; col. 14, line 37 through col. 15, line 52), Ogawa teaches the auxiliary switch causing a change in the beam modulation.

As to claim 16, Ogawa teaches the abrupt change is a change in light beam color (col. 14, lines 59-64). Note that the blue light beam has a different wavelength from that of the red light beam. Accordingly, Ogawa teaches the auxiliary switch causing a change in the beam wavelength.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa.

As to these claims, Ogawa discloses all limitations of these claims except that the change in beam modulation is a change in frequency modulation (of claim 6), a change in duty cycle of the modulation (of claim 7), or a change in pulse width of the modulation (of claim 8), and the abrupt change is a change in polarization (of claim 10). However, Official Notice is taken that both the concept and the advantages of utilizing a change in frequency modulation, duty cycle of the modulation, or pulse width of the modulation, as the change in the beam modulation, and an

abrupt change being a change in polarization, to provide additional information inputted from the stylus to an optical digitizer are well-known and expected in the art. Therefore, it would have been obvious to utilize a change in frequency modulation, duty cycle of the modulation, or pulse width of the modulation, as the change in the beam modulation, or an abrupt change being a change in polarization in the stylus of Ogawa, because this would provide a user additional function(s) for specific application(s), based on a change in frequency modulation, duty cycle of the modulation, pulse width of the modulation, or in polarization.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jimmy H Nguyen/
Primary Examiner, Art Unit 2629